

**Fairchild Semiconductor Corporation  
Cumberland County  
South Portland, Maine  
A-370-71-T-M (SM)**

**Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #3**

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

**I. REGISTRATION**

**A. Introduction**

1. Fairchild Semiconductor Corporation (Fairchild Semiconductor) of South Portland, Maine was issued Air Emission License A-370-71-Q-R on May 9, 2003, permitting the operation of emission sources associated with their semiconductor manufacturing facility. The license was subsequently amended on December 19, 2003 (A-370-71-R-M) and again on January 22, 2004 (A-370-71-S-M).
2. Fairchild Semiconductor has requested a minor revision to their license in order to include an uptime requirement for the Acid and Alkaline Scrubbers.

**B. Application Classification**

This amendment will increase emissions by less than 4 tons/year for each single pollutant and less than 8 tons/year for all pollutants combined. Therefore, this modification is determined to be a minor revision and has been processed as such.

**II. REVISION DESCRIPTION**

Fairchild Semiconductor operates several acid and alkaline wet scrubbers to neutralize acid and alkaline emissions created in the manufacturing process. The pH of the scrubbing media is used as a control parameter: the pH of the acid vapor scrubbing media to be maintained at or above 8 and the pH of the alkaline vapor scrubbing media to be maintained at or below 5. Fairchild monitors pH continuously through the building automation system and checks and records the pH manually once per shift. As the license is written, the facility is required to report any pH deviations regardless of their duration.

Fairchild has requested an uptime requirement be imposed on the scrubber operation. This allows Fairchild the flexibility to conduct routine maintenance and correct pH imbalances that may occur without automatic violation of their air emissions license. Uptime requirements will have minimal impact on actual HAP removal efficiency.

BPT for the acid and alkaline emission points is the use of wet scrubbers, monitored using pH and meeting the opacity standards in License A-370-71-Q-R. Fairchild Semiconductor shall operate the wet scrubbers with a minimum of 97% uptime when the wafer process is in operation. Compliance with the uptime requirement shall be demonstrated through an operations log tracking the time any scrubber is not operating correctly and the time the wafer process is also in operation.

### **ORDER**

The Department hereby grants Air Emission License Minor Revision A-370-71-T-M, subject to the conditions found in Air Emission License A-370-71-Q-R and Amendments A-370-71-R-M and A-370-71-S-M, and the following conditions:

**The following replaces Conditions (23)(i) and (23)(iii) of License A-370-71-Q-R:**

- (23)(i) Fairchild Semiconductor shall operate wet scrubbers to control emissions from the acid and alkaline emission streams. The wet scrubbers shall be each be operated a minimum of 97% of the time the wafer process is operating. [MEDEP Chapter 115, BPT]
- (23)(iii) A maintenance log shall be kept for each of the scrubbers. The log shall contain dates and reasons for all emission upsets as well as descriptions and dates of any maintenance, routine or otherwise, performed on the scrubbers. An operations log shall also be kept for each scrubber. The log shall contain the dates, times and reasons that the scrubbers are not operating (including periods of pH deviation). Fairchild shall also record the operating time of the wafer process.

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**The following are new Conditions:**

**(34) Term of License**

This amendment shall expire concurrently with Air Emission License A-370-71-Q-R. [MEDEP Chapter 115]

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January 22, 2004

Date of application acceptance: January 26, 2004

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Rachel E. Pilling, Bureau of Air Quality.